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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,437	01/03/2001	Subodh K. Raniwala	40002-10217	3542

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Patent Docket Clerk  
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EXAMINER
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CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744.

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/753,437	SUBDOH K. RANIWALA <i>eb</i>	
	<b>Examiner</b>	<b>Art Unit</b>	
	MONZER R CHORBAJI	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/03/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

**This final office action is in response to the amendment received on 11/24/2003**

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2, 5-8, 10-17, 20-22, 24-28, and 42 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Richter et al (U.S.P.N. 6,326,032) in view of Carlson (U.S.P.N. 5,368,828) and further in view of Totten (U.S.P.N. 4,635,662).

With respect to claims 1, 16, and 42, Richter discloses a bottle sterilizing system (figure and col.4, lines 46-61) and a method (columns 9-10) for sterilizing bottles (col.4, lines 46-61) using a solution including hydrogen peroxide (col.3, lines 12-13) source (104) by contacting the interior and the exterior surfaces of the bottles (col.10, lines 49-51). The bottles mentioned in Richter include the inherent features of having an interior and exterior surface, a body and an opening such that the opening has a width smaller

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than the width of the body portion. Also, Richter teaches of removing the sterilant (col.4, lines 39-42) from all the surfaces of the bottles using a rinsing device, after maintaining such a contact for a specified period of time (col.11, lines 20-21). In addition, Richter system involves inverting the bottles in order to drain fluid (col.10, lines 54-56). Richter fails to disclose atomizing the sterilant and means for introducing a sterilant onto the bottle while the bottle is inverted from a location exterior to the opening of the bottle and maintaining the sterilant on the bottle while the bottle is inverted. Carlson discloses an exterior source of sterilizing agent (figure 1, 14) of atomizing the hydrogen peroxide such that a uniform coating of the sterilant (thin liquid film) on the interior side walls and bottom of the carton (col.3, lines 8-20). However, Carlson fails to disclose introducing a sterilant onto the surface while the bottle is inverted from a location exterior to the opening of the bottle and maintaining the sterilant on the bottle while the bottle is inverted. Totten discloses a plurality of inverted bottles (figure 1, 22 and 32) such that a liquid is introduced onto the surface of inverted bottle (figure 10, 190 and 204) from a location exterior to the opening of the bottle (col.8, lines 45-62) and also the sterilant on the surface of the bottle is maintained while the bottle is inverted (figure 1, 34). Thus, one having ordinary skill in the art would have been motivated to modify Richter's method and apparatus to include a bottle inversion step in order to flush the entire bottle of any foreign matter which inadvertently previously found its way into the bottle (Totten, col.1, lines 15-19).

With respect to claims 2 and 17, since Carlson's apparatus uses an atomizer that impinges and dissipates the particles upon the container surface, then it is intrinsic that such a contact results in substantially wetting the surface.

With respect to claims 5-6 and 20-21, Carlson's apparatus uses a hydraulic atomizer nozzle (col.3, lines 8-11) such that the liquid droplets are in the form of a mist (col.3, line 10).

With respect to claims 7-8 and 22, Richter's method and apparatus result in contacting all the surfaces of a bottle (col.10, lines 49-51) such that the sterilant is introduced in a closed chamber (102).

With respect to claims 10-11 and 24, Richter's method and apparatus include the following: heating the sterilant to a temperature between 60 degree Fahrenheit and 180 degree Fahrenheit (col.2, lines 25-26), the sterilizing agent includes hydrogen peroxide and peracetic acid (col.3, line 45), and the sterilant is an aqueous solution (col.3, line 45), which includes about 27.5% hydrogen peroxide (col.3, lines 12-13) and about 5.8% peracetic acid (col.3, lines 16-17).

With respect to claims 12 and 27, even though Richter's method and apparatus does not disclose the inversion of the bottles, however, such a step is intrinsic in order to remove the sterilizing agent from inside the bottles. Inverting the bottles before or after introduction of the sterilant is well within the scope of the one having ordinary skill in the art of designing plants for sterilizing bottles.

With respect to claims 13, 15, 25, and 28, Richter's method and apparatus include the following: the sterilizing agent is removed from the bottle surface by rinsing

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the bottle with water (unlabeled nozzles in 103), and the system is operated in a cold-fill liquid product filling operation (col.2, lines 51-53).

With respect to claims 14 and 26, Carlson's method and apparatus include removing the sterilant from the container surface with compressed air (col.1, lines 66-68).

4. Claims 3-4, 9, 18-19, and 23 are rejected under 35 U.S.C.103 (a) as being unpatentable over Richter et al (U.S.P.N. 6,326,032) in view of Carlson (U.S.P.N. 5,368,828) and further in view of Totten (U.S.P.N. 4,635,662) and Spisak et al (U.S.P.N. 4,566,251).

With respect to claims 3-4, 9, 18-19, and 23, Richter, Carlson, and Totten fail to teach the following: promoting condensation of particles onto the bottle surface, introducing the sterilant in a supersaturated fog, and the chamber is adapted for increased temperature and pressure. However, Spisak teaches that it is known in the art to introduce hydrogen peroxide in the form of fog (col.1, lines 20-21). In addition, Spisak discloses of introducing the sterilant in a way to promote condensation on all surfaces of the carton (col.1, lines 60-64 and col.5, lines 11-28). Since condensation occurs in Spisak's chamber (60a) then such a chamber intrinsically is adapted for increased temperature and pressure. Thus, one skilled in the art would have been motivated to modify Richter's method and apparatus to include introducing the sterilant in a supersaturated fog in order to cause the vapor to condense on all surfaces of the container (Spisak et al, col.1, lines 61-62).

5. Claims 29-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richter et al (U.S.P.N. 6,326,032) in view of Carlson (U.S.P.N. 5,368,828) and further in view of Spisak et al (U.S.P.N. 4,566,251).

With respect to claim 29, the teachings of Richter and Carlson have been addressed above in regard to claims 1 and 16. Richter system involves inverting the bottles in order to drain fluid (col.10, lines 54-56) but fails to disclose a nozzle disposed under and exterior to the opening of a bottle. Carlson fails to teach inverting bottles and disposing a nozzle under and exterior to the opening of a bottle. However, Spisak discloses the concept of inverting (col.1, lines 61-63) open top containers, i.e., bottle (col.3, lines 5-6) on conveyor such that the open top containers are inverted in chain (figure 3, 72) to drain the sterilant (col.5, lines 20-26). While draining the sterilant, the exterior nozzle (figure 3, 114) is disposed under the open top containers. One having ordinary skill in the art would have been motivated to modify Richter's method and apparatus to include inverting the bottles in order to insure all the condensate has been drained (Spisak, col.1, lines 63-65).

With regard to claims 31-32, and 37, Spisak teaches that it is known in the art to introduce hydrogen peroxide in the form of fog (col.1, lines 20-21). In addition, Spisak discloses of introducing the sterilant in a way to promote condensation on all surfaces of the carton (col.1, lines 60-64 and col.5, lines 11-28). Since condensation occurs in Spisak's chamber (60a) then such a chamber intrinsically is adapted for increased temperature and pressure.

With respect to claim 30 see claims 2 and 17 as previously addressed above.

With respect to claims 33-34 see claims 5-6 and 20-21 as previously addressed above.

With respect to claims 35-36 see claims 7-8 and 22 as previously addressed above.

With respect to claims 38-39 see claims 10-11 and 24 as previously addressed above.

With respect to claim 40 see claims 12 and 27 as previously addressed above.

6. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richter et al (U.S.P.N. 6,326,032) in view of Carlson (U.S.P.N. 5,368,828), Spisak et al (U.S.P.N. 4,566,251), and further in view of Totten (U.S.P.N. 4,635,662).

With respect to claim 41, the teachings of Richter and Carlson have been addressed above in regard to claims 1 and 16. Richter system involves inverting the bottles in order to drain fluid (col.10, lines 54-56) but fails to disclose a nozzle disposed under and exterior to the opening of a bottle and contacting the bottle interior with a sterilant while the bottle is inverted. Carlson fails to teach the following: inverting bottles, disposing a nozzle under and exterior to the opening of a bottle, and contacting the bottle interior with a sterilant while the bottle is inverted. However, Spisak discloses the concept of inverting (col.1, lines 61-63) open top containers, i.e., bottle (col.3, lines 5-6) on conveyor such that the open top containers are inverted in chain (figure 3, 72) to drain the sterilant (col.5, lines 20-26), while draining the sterilant, and the exterior nozzle (figure 3, 114) is disposed under the open top containers, Spisak fails to teach contacting the bottle interior with a sterilant while the bottle is inverted. Totten teaches



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contacting the bottle interior with a sterilant while the bottle is inverted (figure 1, 32 and 22). Thus, one having ordinary skill in the art would have been motivated to modify Richter's apparatus to include a bottle inversion step in order to flush the entire bottle of any foreign matter which inadvertently previously found its way into the bottle (Totten, col.1, lines 15-19).

### ***Response to Arguments***

7. Applicant's arguments filed 11/24/2003 have been fully considered but they are not persuasive.

On page 12 of the response, applicant argues, "Richter makes no disclosure or suggestion whatsoever of the above elements i-iv each of which is required in Applicant's invention as claimed". The Carlson and the Totten references are combined with the Richter et al reference, since Richter et al does not disclose such features as indicated in the office action 07/28/2003 on page 3.

On page 12 of the response, applicant argues, "Totten is merely concerned with inverted rinsing, not inverted sterilization". The concept of sterilizing bottles and inverting them was disclosed in Richter et al since the bottles are flooded with the sterilant. However, the Totten reference is combined to show that treating bottles while they are inverted is known. Also, rinsing is sterilizing.

On page 12 of the response, applicant argues, "Totten certainly does not teach or suggest introducing an atomized sterilant". As mentioned above, the Totten reference is combined to show that the concept of inverting bottles is known. The Carlson

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reference teaches the concept of atomizing the sterilant to be applied onto the surfaces of a container.

On page 13 of the response, applicant argues, "there is still no teaching, suggestion, or disclosure in Carlson whatsoever which would suggest introducing an atomized sterilant into an inverted bottle, and more particularly, where the bottle has an opening that prevents atomized particles from impinging directly on a portion of a bottle surface". The Carlson reference is combined for the known concept of applying atomized sterilants to containers and not for inverting bottles. The inversion of bottles is disclosed in the Totten reference such that the inherent structure of the bottle of Totten in view of Carlson results in preventing atomized particles from impinging directly on a portion of a bottle surface.

On page 13 of the response, applicant argues, "In addition, there is no suggestion to make the combination of Richter, Carlson, and Totten. Even if one skilled in the art combined the above references, one would not arrive at Applicant's claimed invention and method inventions because the references do not teach, disclose or suggest alone or in combination introducing an atomized sterilant into an inverted bottle from a location exterior to the bottle, including where the bottle has an opening that prevents atomized particles from impinging directly on a portion of a bottle surface, to form a thin film on the surface". The Richter, Carlson, and Totten references deal with sterilizing containers specifically bottles that are available to one skilled in the art. When the references are combined the bottles of Richter et al and Totten with their inherent structure combined with the atomization of sterilants to sterilize bottles as disclosed in

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Carlson would result in preventing atomized particles from impinging directly on a portion of a bottle surface while the bottle is inverted as taught in Totten. Since all the references are concerned with sterilizing bottles, the combination of Richter, Carlson, and Totten would insure a uniform coating of the sterilant on the interior surfaces of a container (Carlson, col.3, lines 18-20) and would insure that by inverting a bottle any foreign matter which inadvertently previously found its way is flushed (Totten, col.1, lines 15-19).

On page 13 of the response, applicant argues, "Spisak, however, merely shows inverting a bottle after an atomized sterilant has been introduced". Claim 29 does not include such a limitation. Claim 40, does include "the interior surface is contacted while the bottle is inverted". Such a feature is taught in the Totten reference.

On page 14 of the response, applicant argues, "Indeed, the prior art teachings of injecting sterilant when the bottle is upright and inverting only to rinse teaches away from the claimed invention of injecting sterilant when the bottle is inverted". The concept of sterilizing bottles is disclosed in, for example, the Carlson reference. The rinsing or sterilizing bottles while inverted is taught in the Totten reference. Thus, the prior art teaches sterilizing while bottles are inverted.

On page 14 of the response, applicant argues, "The examiner asserts that one skilled in the art would be motivated to modify Richter's method and apparatus to include a bottle inversion step in order to flush the entire bottle of any foreign matter which inadvertently previously found its way into the bottle. However, this is not at all Applicant's reason for inverting the bottle as disclosed in Applicant's invention as

claimed and misses the point of Applicant's invention". The Totten reference teaches sterilizing while inverting the bottles. Thus, Totten's reason for inverting bottles does not have to be for the same reason as the applicant claims.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 8:30-5:00.
11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (571) 272-1281. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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